LETTER REPORT
FOR
PR MALLORY SITE
CRAWFORDSVILLE, INDIANA
TDD#: T05-9210-112
PAN#: EIN0788RBA

June 20, 1994

Prepared By: Michelle L. Laster Date: 6/20/94

Reviewed By: MLL for Karen Rydzewski Date: 6/20/94

Approved By: [signature] Date: 6/20/94

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June 20, 1994

Ms. Gail Nabasny
United States Environmental Protection Agency
Deputy Project Officer
77 W. Jackson Blvd. 5th Floor
Chicago, Illinois 60604

RE: PR Mallory site
Crawfordsville, Indiana
TDD#: T05-9210-112
PAN#: EIN0788RBA

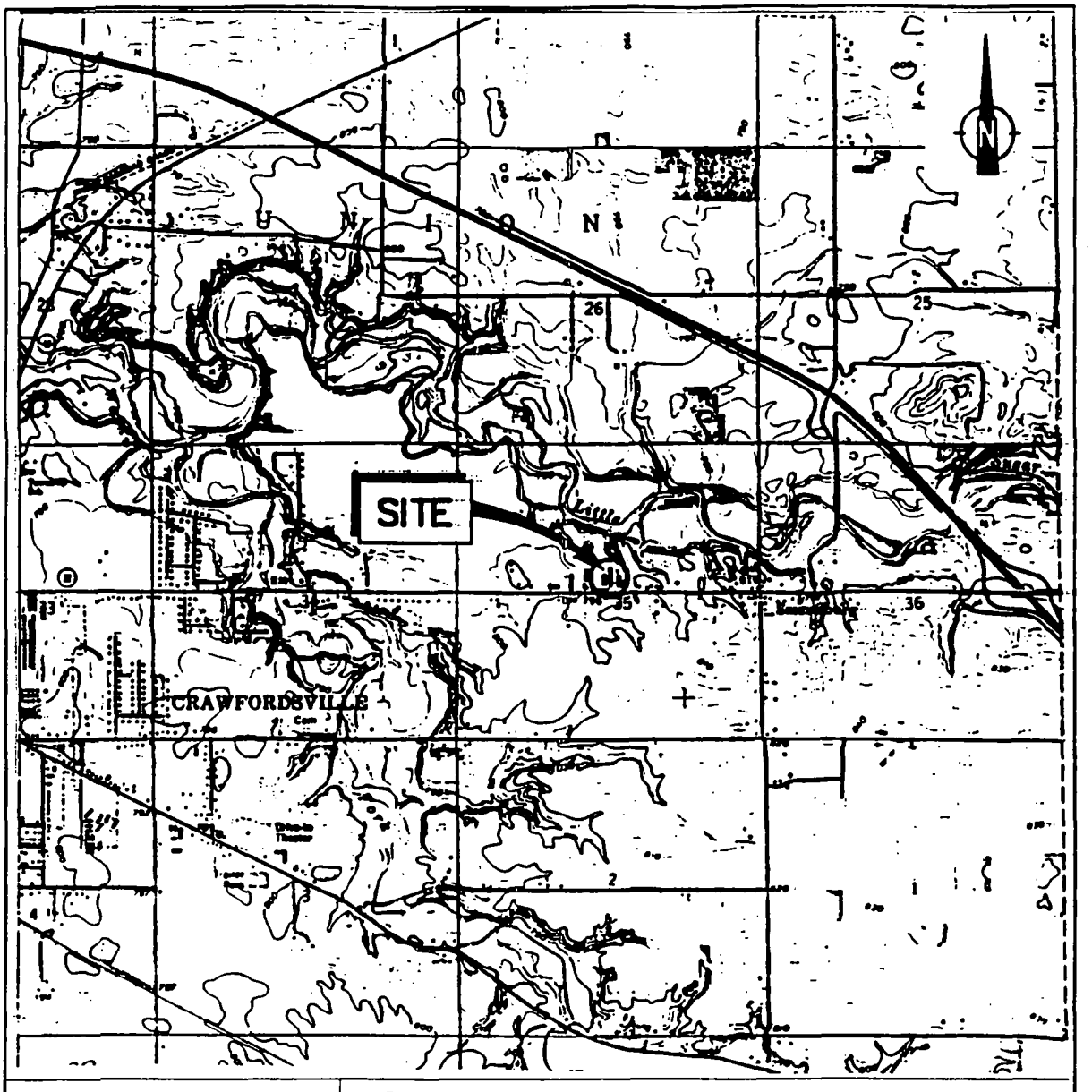
Ms. Nabasny:

The Ecology and Environment, Inc. (E & E) Technical Assistance Team (TAT) was tasked by the United States Environmental Protection Agency (U.S. EPA) under Technical Direction Document (TDD) # T05-9210-112 to provide oversight during the final phase of an extensive cleanup conducted by the potentially responsible party (PRP) at the PR Mallory site (PRM) located in Crawfordsville, Montgomery County, Indiana. The TAT was also tasked to prepare a letter report detailing site activities during this oversight. Finally, the TAT was tasked to review the final report submitted by the PRP's consultant, and include any comments regarding this report in the TAT letter report.

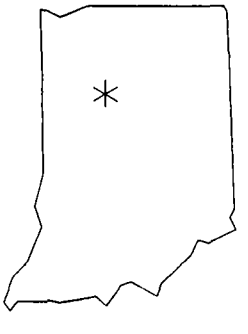
SITE BACKGROUND

The PRM site is located on the north side of State Road 32, approximately three miles east of Crawfordsville, Indiana. Refer to Figure 1 for site location. The PRM site encompasses approximately four acres in a light commercial area. The site is bordered by State Road 32 to the south, Superior Moving and Storage to the east (Superior), Little Sugar Creek to the north and Servies Enterprises (Servies) to the west. At the time of E & E TAT oversight, all above-ground wastes and structures had been removed, and the site was merely a flat parcel of land.

From 1957 until 1969, the PRM site operated as a dielectric capacitor manufacturing plant. A variety of dielectric fluids, including oils containing polychlorinated biphenyls (PCBs), were



SITE LOCATION



ecology and environment, inc.
Technical Assistance Team
Region V

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TITLE: SITE LOCATION MAP	FIGURE #: 1
SITE: PR MALLORY	SCALE: 1:24000
CITY: CRAWFORDSVILLE STATE: IN	PAN: EIN0788RBA
SOURCE: CRA PHASE III REPORT	DATE: 1993
	REVISED: N/A

used in the manufacturing process throughout this period. In 1968, a fire destroyed the northeast section of the plant, and temporarily halted production. The plant remained in operation until 1969, when a second fire destroyed it entirely. Duracell International Inc. (Duracell) sold the PRM site to Terra Products (Terra) in June 1986. In June 1992, prior to the initiation of final removal actions, the site was sold to Servies.

The PRM site was initially inspected by the Indiana Department of Environmental Management (IDEM) in October 1985 and April 1986. IDEM representatives discovered capacitors scattered throughout the plant area and along the bank of a nearby ravine. The oil in the capacitors was found to contain PCB concentrations as high as 100 percent. IDEM then requested that the U.S. EPA conduct a removal action site assessment at the PRM site.

In April 1986, the U.S. EPA conducted a site assessment at the PRM site. Soil samples were collected from an apparent capacitor disposal area, and analytical results indicated PCB concentrations in the soil ranging from 325 parts per million (ppm) to 165,402 ppm. Based on these results, the U.S. EPA issued an Administrative Order (AO) to Duracell, the former owner and operator, and Terra, the current owner. The respondents were ordered to restrict site access, assess the extent of the contamination, and implement a program to remove and secure all capacitors and contaminated soil.

After a series of meetings between Duracell, the U.S. EPA, and IDEM, a legal boundary survey was financed by Duracell. The survey indicated that the apparent disposal area extended beyond the former PRM property to the east, into land owned by Superior. The U.S. EPA issued an amended AO on August 20, 1986, naming Superior as a respondent.

Duracell initiated emergency removal activities at the site in three separate phases. Numerous reports and plans were generated over the course of the removal actions at the PRM site. A complete overview of site activities, and related documents generated, can be found in the Phase III Removal Action Report written by the PRP's contractor, Conestoga-Rovers & Associates (CRA), in October 1993. The following is a brief and cursory summary of removal actions at the PRM site, as condensed from the aforementioned CRA report.

Phase I removal actions, and subsequent report submittal, were performed between August 1986 and July 1987. Phase I actions were initiated to prevent the continued release of PCBs to the environment from the capacitor disposal area. Phase I activities included the installation of a security fence to restrict site access, installation of a sediment trap in the adjacent ravine, excavation and on-site securement of debris and capacitors in

storage cells, implementation of a comprehensive sampling and analysis plan for site characterization, and development and implementation of a hydrogeological investigation.

Phase II removal actions, and subsequent report submittal, were completed from February to September 1988. Activities performed during this phase included the construction of a second on-site concrete storage cell. Additional contaminated materials were excavated from areas formerly accessible to the public (outside the fence boundaries) and placed in the new cell. On-going extent of contamination sampling and analysis, as well as additional hydrogeological investigations, were continued in Phase II. Following the completion of Phase II activities, Battery Properties, Inc., a subsidiary of Kraft, Inc., took title of the PRM property.

Phase III removal actions at the PRM site were divided into two distinct sections. Original Phase III removal actions were conducted at the PRM site between November 1988 and August 1990. Supplemental Phase III removal actions were conducted at the site between February and August 1993. Overall objectives of Phase III removal actions included the excavation and off-site disposal of residually PCB-contaminated soil, concrete, and debris, based on predetermined cleanup criteria approved by the U.S. EPA and IDEM. In addition, Phase III objectives included the removal and off-site disposal of capacitor and liquid wastes.

Phase III removal actions are considered to be the final cleanup phase at the PRM site. Refer to the aforementioned October 1993 CRA report for detailed descriptions of all activities including cleanup levels, sampling methods, air monitoring programs, construction events, and selected disposal options and facilities. CRA, the PRP's consultant, provided supervision and direction for all Phase III construction activities. The U.S. EPA and IDEM shared technical oversight responsibilities throughout the Phase III removal actions. Agency representatives were on-site for all major construction activities, which included soil excavation, ravine sediment excavation, loading of contaminated materials for transport to off-site disposal facilities, surface restoration activities, borehole installations, and project demobilization.

In December 1988, excavation activities adjacent to Terra's building were temporarily discontinued due to stabilization concerns. Soils containing PCB levels ranging from 36 to 37,000 milligram/kilogram (mg/kg) remained in a low lying sand seam adjacent to the building. A on-going subsurface soil sampling program was conducted at the site between December 1988 and June 1992 in order to determine the areal and vertical extent of PCB contamination adjacent to and beneath Terra's building. Options for the removal of this contaminated material were investigated,

and plans to remove the contaminated soil with an open excavation and shoring support to Terra's building were finalized in early 1990.

In the fall of 1990, Kraft decided to wait to conduct the Supplemental Phase III removal actions at the PRM site until the fall of 1991, at which time Terra intended to move their operations to a new location. This would enable the planned removal activities adjacent to and beneath the Terra building to occur with unhindered access. After finalizing a formal access agreement between Kraft and Terra, the property tract associated with the removal activities was sold to Servies in June 1992. Supplemental Phase III removal actions were delayed until February 1993, at which time an access agreement between Kraft and Servies had been finalized. The U.S. EPA tasked the E & E TAT to provide technical oversight during Supplemental Phase III excavation and construction activities.

SUPPLEMENTAL PHASE III SITE ACTIVITIES

On February 19, 1993, the TAT met with two CRA subcontractor representatives, who explained that building dismantling activities would begin shortly, and that RUST Remedial Services (RUST) cleanup contractors were expected to mobilize to site in early March. Building dismantling activities were completed on March 11, 1993. A 45-foot long section from the central portion of Terra's eastern most building was dismantled and removed. Temporary end walls were put in place as needed. A 30-foot by 35-foot section of the concrete building floor was removed to facilitate shoring installation and excavation of the underlying soils.

Shoring installation activities began on March 9, 1993. Steel H-piles were installed eight feet apart, to a depth of approximately 33 feet, along the maximal areal limit of contaminated soil excavation. Horizontal wooden lagging was installed manually between the H-piles to a depth of ten feet. Steel cable tie-backs were then placed throughout the wooden lagging and grouted into the undisturbed ground beneath the building. Steel whalers were welded in place between the H-piles, and tension was then applied to the tie-backs.

On March 18, 1993, the U.S. EPA On-Scene Coordinator (OSC) and the TAT attended an off-site contingency planning meeting in Crawfordsville. The meeting was presented by Jay Churchill of CRA. Other attendees included Craig Nottingham, IDEM, Ken Staton, RUST Project Manager, and Tom Uher, RUST Health and Safety Officer, as well as various local and County officials. The meeting was held to review the anticipated work plans and schedules, familiarize everyone with the established emergency contingency plan, and discuss site health and safety issues.

The U.S. EPA and IDEM agreed to share oversight responsibilities during the Supplemental Phase III actions. U.S. EPA oversight would be conducted by the TAT. Periodic visits by both Agencies' representatives would be conducted during building dismantling and reconstruction activities, shoring installation, clean overburden excavation, and backfilling and surface restoration activities. The TAT would provide full-time oversight during contaminated soil excavation activities. The TAT photodocumented on-going site activities, and relevant photologs can be found in Appendix A.

The TAT returned to the PRM site to oversee work progress on March 25 and April 1, 1993. Plastic safety fencing had been erected around the perimeter of the excavation area. Activities focused on the excavation of the silty clay overburden soil that lay above the PCB-contaminated sand seam. Overburden soil was being excavated to the full areal limits of the shoring within the dismantled portion of the Terra building. Outside of the limits of the Terra building, clean overburden was excavated westward up to the sheet pile wall on the east side of the building, and eastward up to the subsurface high density polyethylene (HDPE) liner. This liner was installed during original Phase III removal actions to separate the contaminated material in the low-lying sand seam from adjacent clean backfill material.

The overburden material was being staged in three separate stockpiles on polyethylene sheeting in an area east of the excavation pit. All stockpiles were sampled and analyzed for PCBs. Results indicated that PCB levels were either not detected or low enough to warrant using the overburden as backfill upon completion of excavation activities. Excavation sidewalls were also sampled to reverify appropriate overburden PCB levels. The final two feet of overburden soil was left in place to be excavated and disposed of with the PCB-contaminated material.

Throughout overburden excavation activities, small quantities of water ponded within the excavation pit due to precipitation and infiltration events. Because this water had come in contact with only the clean overburden soils, it was subsequently pumped and discharged to the ground surface north of the excavation.

Between April 14 and 21, 1993, shoring activities were completed at the PRM site. Tension testing of the cable tie-backs at locations immediately east of the Terra building had indicated insufficient tension was being exhibited. Additionally, attempts to mechanically increase the tension of the tie-backs failed to satisfy the design requirements of the shoring system. Therefore, a steel sheet pile wall was installed four feet east of the steel H-pile and wooden lagging shoring system. The wall was comprised of a continuous set of interlocking steel piles, installed to a depth of 36 feet below grade.

Contaminated soil excavation activities were performed during the period of April 22-28, 1993. The TAT performed continuous oversight during the removal of the majority of the contaminated soil. During the excavation period, the entire thickness of the sand seam, two to three feet, and additional underlying contaminated clay material was excavated. Some contaminated soil was temporarily stockpiled within the excavation pit due to its high water content. A berm and sump were constructed adjacent to the stockpile to collect water which drained from the excavated contaminated soil. Drained water was pumped to a storage tank to be treated for off-site disposal at a later date.

A shallow access ramp was constructed adjacent to the north end of the excavation. Semi-trailer trucks were backed partially down the access ramp for loading. Dewatered contaminated soil was loaded directly into the trucks utilizing a trackhoe with an extended hydraulic arm. The trackhoe was positioned on a benched platform at the northeastern end of the excavation, and the hydraulic arm allowed access to all contaminated areas without tracking through them. If the contaminated soil still contained excess water, bags of portland cement were added directly to either the stockpile or rear of the trailer beds. Polyethylene sheeting was placed on the access ramp and the exterior of the trucks to ensure that any spilled contaminated materials would fall back into the excavation area. Trucks were weighed on portable scales prior to leaving site.

Initial excavation activities focused on the area within the limits of the dismantled portion of the Terra building. Northern and southern excavation limits were based on previous sampling and analytical results. The western excavation limit was initially determined based on visual observations. In addition, a confirmation sample was collected from the western limit of the sand seam. Analytical results indicated that PCB levels were well below the 25 mg/kg cleanup criterion. Analytical results from an additional confirmation sample collected from the hard pan material at the base of the building excavation area indicated no detectable PCB concentrations. Due to high levels of water infiltration beneath the dismantled building, an initial foot of stockpiled material was backfilled into the excavation pit immediately.

Excavation activities then proceeded to the area immediately east of the building. The southern excavation limit was based on previous sampling and analytical results. The eastern limit was established by the location of the HDPE liner installed previously. Initial confirmation sample results from the southern end of the excavation indicated PCB concentrations of 110 mg/kg, well above the cleanup level of 25 mg/kg. Additional soil was excavated from the sand seam to the west at a distance of approximately eight feet. By removing all of the sand seam up

to the sheet pile wall, all contaminated material was removed as documented by previous analytical results.

Excavation activities continued outside of the building limits in a northerly direction. A total of four confirmatory samples were collected from the hard pan material at the base of the excavation outside the building limits. Analytical results indicated that none of the four samples contained detectable levels of PCBs. The total depth of excavation areas beneath and adjacent to the building varied from approximately 18 to 21 feet below grade. A total of 20 semi-trailer truck loads, or 457.67 tons, of PCB-contaminated soil was removed from the site. The contaminated soil was disposed of in a TSCA-approved cell at the Chemical Waste Management (CWM) landfill in Emelle, Alabama.

Following the completion of all excavation activities, the area was backfilled with the stockpiled clean overburden. Due to extremely wet soil conditions, dry Portland cement was added to the initial lift of backfill. Backfill material was spread utilizing a bulldozer. A vibrating sheeps-foot compactor was then used to compact the backfill into nominal 6-inch lifts. The backfill was compacted to 100 percent of the maximum dry density of the soil at areas within the limits of the Terra building, and within the cone of influence of the building footings. The backfill was compacted to 95 percent of the maximum dry density of the soil in all other areas.

After backfilling activities were completed, six to twelve inches of imported clean crushed stone were placed over the former excavation area east of the Terra building. Topsoil was imported and placed over disturbed portions of the grassy area east of the Terra building, and the area was reseeded.

The TAT continued to provide periodic oversight at the facility throughout all backfilling and restoration activities. Site visits were conducted on May 6, 13, 19, and 24, 1993. Additional site visits were conducted on June 3 and 9, 1993. During all site visits, the TAT met with available CRA and/or RUST personnel to discuss on-going activities. The TAT informed the U.S. EPA OSC of site progress after each visit.

Approximately 12,400 gallons of wastewater was generated on-site during Supplemental Phase III activities, including the dewatering of the excavation area and the decontamination of site equipment. The wastewater was pretreated on-site with activated carbon, and then transported to CWM's deep well injection system in Vickory, Ohio. Three loads of treated wastewater were transported from the PRM site between June 2 and 4, 1993.

Approximately 1,600 gallons of solvent wastewaters were generated when approximately 15 gallons of spent solvent equipment decontamination solution was inadvertently mixed with excavation

and monitoring well purge waters. This solvent wastewater was also pretreated with activated carbon on-site and transported to Vickory, Ohio. Upon arrival at the Vickory facility, unacceptable levels of PCBs were detected in the wastewater, and it was subsequently returned to the PRM site. The activated carbon in the pretreatment system was changed out, and the solvent wastewaters were retreated twice. On June 22, 1993, the solvent wastewaters were retransported to the Vickory facility and accepted for disposal.

All wastewater treatment sediment and spent activated carbon was transferred to drums. On July 20, 1993, these drums were transported for ultimate disposal by incineration at Rollins Environmental Services in Deer Park, Texas. The decontamination pad was demolished and disposed of at a local sanitary landfill, following confirmation sampling for PCBs. The majority of the equipment and services were removed from the site by July 20, 1993. The dismantled portion of the Terra building was reconstructed to match its original condition. Reconstruction activities commenced in early June 1993 and were completed by mid-August 1993.

On August 16, 1993, the U.S. EPA OSC and the TAT attended a final site close-out meeting in Crawfordsville, Indiana. The meeting was sponsored by CRA and the U.S. EPA in order to address any remaining concerns regarding the PRM site. Local officials and adjacent property owners were invited to attend. After a brief question and answer session, interested parties travelled to the PRM site to observe final site conditions.

CONCLUSIONS

The E & E TAT has received the final site report prepared for the PRP by CRA. A review of the report has indicated that all significant Supplemental Phase III activities are well-documented. All removal activities as specified in the AO and related work plans for the PRM site have been completed. As requested by the OSC, the TAT has prepared this letter report in order to briefly summarize activities conducted at the PRM site.

If you have any further questions, or require additional information, please feel free to contact me at (312) 663-9415.

Sincerely,

Michelle L. Jaster

Michelle L. Jaster
E & E TAT Biologist

cc: OSC William Simes
TATL Thomas Kouris

Attachment

REFERENCE:

CRA, October 1993, Phase III Removal Action Report, Former P.R. Mallory Plant Site, Crawfordsville, IN, Ref. No. 1916(30).

APPENDIX A -- SITE PHOTOLOGS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 1 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/22/93

TIME: 1130

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Preparing loading ramp for trailer trucks to back down during loading.

DATE: 4/22/93

TIME: 1130

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Contaminated area marked off beneath dismantled portion of Terra building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 2 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/22/93

TIME: 1130

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of both contaminated areas: area to right is beneath dismantled building; area to left is southern limits of contamination.

DATE: 4/22/93

TIME: 1140

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Closeup of southern most contaminated area.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 3 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/22/93

TIME: 1150

DIRECTION OF PHOTOGRAPH: SE

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Overburden stockpiles north of excavation pit. Covered piles have been tested for PCBs; uncovered piles will be tested.

DATE: 4/22/93

TIME: 1445

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Loading first trailer truck with PCB-contaminated soil. Note visqueen in place for soil runoff.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 4 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/22/93

TIME: 1450

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: On-going excavation in central portion of contaminated area (beneath dismantled building).

DATE: 4/22/93

TIME: 1500

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Preparing to collect confirmation sample from west wall of excavated area. Note water beginning to infiltrate excavation.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 5 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/22/93

TIME: 1610

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Pumping infiltrate water from excavation pit. Water pumped into storage tank for disposal at a later date.

DATE: 4/22/93

TIME: 1615

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Beginning excavation in southern contaminated area.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 6 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/22/93

TIME: 1620

DIRECTION OF PHOTOGRAPH: Down

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Closeup of excavation area beneath dismantled building being dewatered.

DATE: 4/23/93

TIME: 0830

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Collecting confirmation sample from southern excavation area.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 7 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/23/93

TIME: 0845

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Southern excavation area extended up to western wall.

DATE: 4/23/93

TIME: 1100

DIRECTION OF PHOTOGRAPH: SE

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: On-going excavation. Note stockpiled contaminated soil at base of excavation for dewatering.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 8 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/23/93

TIME: 1400

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Trench and pump setup around excavation area for dewatering purposes.

DATE: 4/23/93

TIME: 1415

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Excavation activity overview.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 9 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/23/93

TIME: 1630

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Final excavation in southern area. Note trench along sheet pile to collect surface water.

DATE: 4/23/93

TIME: 1630

DIRECTION OF PHOTOGRAPH: NE

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Preparing visqueen on trailer truck path (to catch any spilled contaminated soil during loading).

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 10 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/24/93

TIME: 1650

DIRECTION OF PHOTOGRAPH: SE

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: On-going excavation in central area.

DATE: 4/24/93

TIME: 1710

DIRECTION OF PHOTOGRAPH: down

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Preparing to backfill excavated area beneath dismantled building as dewatering.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 11 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 4/24/93

TIME: 1725

DIRECTION OF PHOTOGRAPH: NW

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Backfilling central excavation area beneath dismantled building.

DATE: 4/24/93

TIME: 1730

DIRECTION OF PHOTOGRAPH: down

WEATHER CONDITIONS: Mostly sunny Upper 50s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Backfilled area beneath dismantled building completed.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 12 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 5/13/93

TIME: 1100

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Backfilling progress. Currently approximately 8 feet below grade in southern excavation area.

DATE: 5/13/93

TIME: 1110

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Backfill progresss in northern and central excavation areas. Note compactor in use.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 13 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 5/13/93

TIME: 1120

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of excavation area and backfilling progress.

DATE: 5/13/93

TIME: 1140

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Sunny Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Continuing to backfill and smooth out excavation area.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 14 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 5/24/93

TIME: 1530

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Partly cloudy Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Using crane and vibrator to remove sheet pilings.

DATE: 5/24/93

TIME: 1535

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: Partly cloudy Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Stacked pile of previously removed sheet pilings.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 15 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 6/03/93

TIME: 1050

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: Partly cloudy Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Dismantled area prepared for future building reconstruction.

DATE: 6/03/93

TIME: 1100

DIRECTION OF PHOTOGRAPH: SW

WEATHER CONDITIONS: Partly cloudy Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Removing sludge and deconning poly wastewater tanks.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 16 OF 20

U.S.EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 6/03/93

TIME: 1130

DIRECTION OF PHOTOGRAPH: SE

WEATHER CONDITIONS: Partly cloudy Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Pumping wastewater into tanker truck for disposal.

DATE: 6/03/93

TIME: 1200

DIRECTION OF PHOTOGRAPH: S/SW

WEATHER CONDITIONS: Partly cloudy Upper 60s

PHOTOGRAPHED BY: Jaster

SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of backfilled excavation areas.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY

U.S. EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 8/16/93 TIME: 1400 DIRECTION OF PHOTOGRAPH SE PHOTOGRAPHED BY: JASTER

WEATHER CONDITIONS: PARTLY SUNNY, LOW 70s SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of restored area at southest end of site. Note Superior in background.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY

U.S. EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 8/16/93 TIME: 1400 DIRECTION OF PHOTOGRAPH N/NE PHOTOGRAPHED BY: JASTER

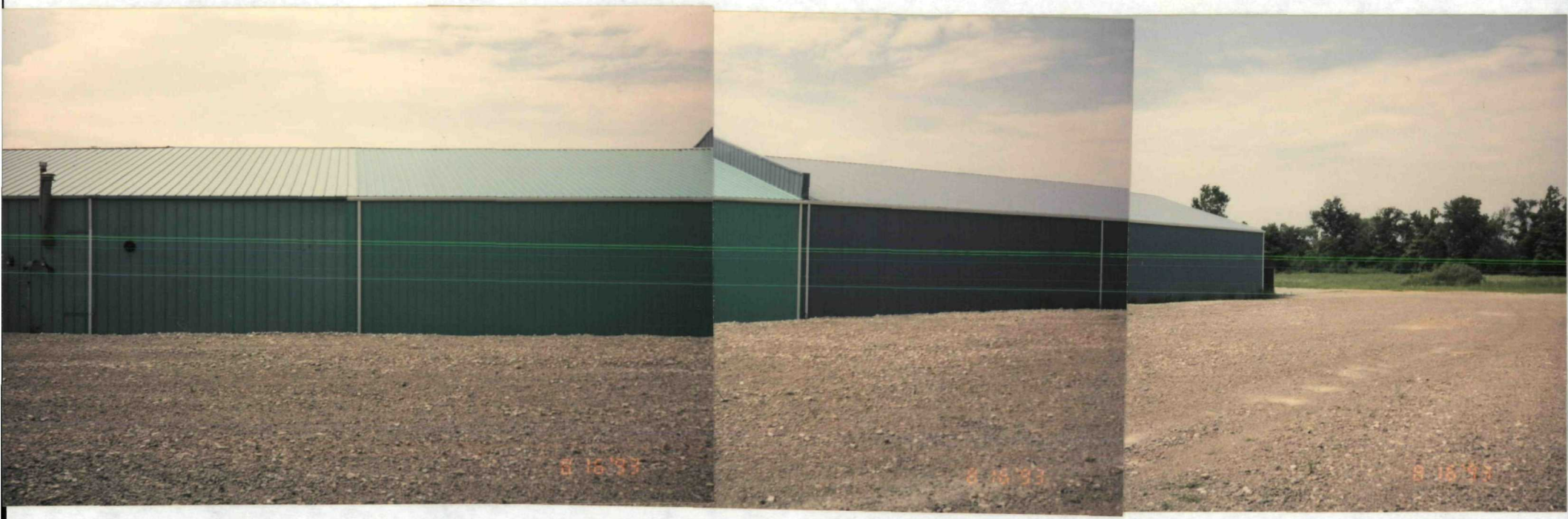
WEATHER CONDITIONS: PARTLY SUNNY, LOW 70s SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of north area of site. Note creek location on other side of treeline.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 19 OF 20

U.S. EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA



DATE: 8/16/93 TIME: 1400 DIRECTION OF PHOTOGRAPH N/NW PHOTOGRAPHED BY: JASTER

WEATHER CONDITIONS: PARTLY SUNNY, LOW 70s SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of central portion of site. Note new gravel put in place across traffic areas. Also note reconstucted portion of former Terra building (central aqua portion).

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: PR MALLORY PAGE 20 OF 20

U.S. EPA ID: TDD: T05-9210-112 PAN: EIN0788RBA

DATE: 8/16/93 TIME: 1400 DIRECTION OF PHOTOGRAPH S/SW PHOTOGRAPHED BY: JASTER

WEATHER CONDITIONS: PARTLY SUNNY, LOW 70s SAMPLE ID (if applicable): N/A

DESCRIPTION: Overview of southern portion of site. Note new gravel placed over former excavation areas.